

PATENT  
0425-0754P

## IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Takaaki TADOKORO et al. Conf.: 9549  
Appl. No.: 09/473,055 Group: 1731  
Filed: December 28, 1999 Examiner: CHIN, P.  
For: PAPER QUALITY IMPROVER FOR PAPERMAKING  
AND METHOD FOR PRODUCING PULP SHEET

## DECLARATION UNDER 37 C.F.R. § 1.132

I, Atsushi Hiraishi, declare and state

- 1) I am a graduate of the Graduate School of Science at Osaka City University where I finished a Master Course of Science with a specialty in the synthesis of organic compounds.
- 2) I have been employed by Kao Corporation for 11 years.
- 3) From 1992 – 1997, I worked on Developing Polyurethane Foam, from 1997 – 1999 I worked on Research in Polymer Emulsions, and from 1999 – 2003, I have worked on Developing Chemicals for papering.
- 4) I am familiar with the Office Action dated March 20, 2003.
- 5) I am one of the co-inventors for the above-identified application.
- 6) The following experiments were done by me or under my direct control.
- 7) The results of the compounds in Bonin '703 (DE 42 02 703 A1) were compared to the compounds in the instant invention.
- 8) The results are summarized in Table 1 below.

Table 1.

Compound	standard improved bulky value	standard improved brightness	standard improved opacity	lypotropic degree
Claimed in claim 7	at least 0.02 g/cm <sup>3</sup>	at least 0.5 point	at least 0.5 point	not less than 4%
Claimed in claim 15	at least 0.02 g/cm <sup>3</sup>	at least 0.7 point	at least 0.7 point	not less than 4%
Present Invention	0.028 g/cm <sup>3</sup>	1.36 point	1.70 point	5.6 %
Bonin A	0.003 g/cm <sup>3</sup>	0.09 point	-0.13 point	-1.9%
Bonin B	0.008 g/cm <sup>3</sup>	0.10 point	0.34 point	7.5 %
Bonin C	0.009 g/cm <sup>3</sup>	0.73 point	0.27 point	15.3%
Bonin D	0.004 g/cm <sup>3</sup>	0.88 point	0.66 point	7.6%

Compound of the present invention is pentaerythritol stearate with an average ester replacement of 45%.

Compound of Bonin A is Soybean oil EO 4mol.

Compound of Bonin B is Soybean oil EO 9mol.

Compound of Bonin C is Caster oil EO 10mol.

Compound of Bonin D is Caster oil EO 30mol.

- 9) All of the examples disclosed in Bonin '607 were reproduced (please see the Examples on page 4 in the translation of Bonin '607) and the data from these experiments are reproduced in the above table 1.
- 10) As can be seen from this table, only the compound of Bonin D meets two of the three quality improving elements claimed in claim 7.
- 11) Only one of the claimed elements in claim 15 is met by the compound of Bonin D.
- 12) Bonin A and Bonin B are completely outside the scope of the claimed elements in claims 7 and 15.
- 13) Bonin C has only one element that falls within the scope of claims 7 and 15.

I hereby declare all statements made herein of my own knowledge are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment or both under 18 USC §1001, and that such willful false statements may jeopardize the validity of the application or any patent that issues therefrom.

Atsushi Hiraishi  
signature of Atsushi Hiraishi

Sep. 10. 2003  
date of signature